Form Over Substance: Learning Objectives In The Business Core

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ABSTRACT

While members of the business faculty community have been advocating active learning in the classroom, it appears that textbooks encourage learning from a passive perspective. A review of learning objectives from 16 textbooks used in Financial Accounting, Managerial Accounting, Finance, and Marketing demonstrates a focus on basically the same set of primary verbs at a low cognitive level. These low cognitive level verbs differ in substance from the expectations contained in the end-of-the-chapter materials. In a world of assessment, the authors are concerned that the textbook learning objectives seem to focus on the form of technical content and not the substance of student learning.

Keywords: learning objectives; student learning; assessment

INTRODUCTION

Members of the business faculty community have been advocating active learning for our classrooms. A basic commodity in all of our classrooms is the textbook. These textbooks appear to be written based upon technical content to be contained in the courses we teach and do not seem to be driven by the learning objectives which begin the majority of the chapters we teach.

This paper looks at the use and design of textbook learning objectives from the perspective of the meaning and classification of the primary verb used when writing the objective. Issit has described textbooks as being part of the pedagogical model and as being passive. Phillips and Phillips have shown that only some students read learning objectives. King found that students are not always aware of the objectives from which they could learn best. Writers, such as Brazelton and Eide, encourage faculty to utilize a variety of learning techniques and to provide students with learning strategies to help process information to enable them to become active participants in the learning process.

Textbooks produced for the various business disciplines include learning objectives. However, these objectives appear to be there in form only. This study explores what could be included for the substance of the learning objectives.

This paper begins with a brief description of some underlying educational theory and a definition of critical thinking. The use of learning objectives is explored by examining their use by students and how they appear to be used in the construction of textbooks. The current study then examines textbooks across business disciplines in terms of the form of the learning objectives, while always searching for the underlying substance. The paper finishes with a discussion of its limitations and ideas for future research as well as our conclusion.

BLOOM'S TAXONOMY

Bloom's taxonomy (1956) is an important educational work that is cited hundreds of times a year (Brazelton 2000, 61). The taxonomy is based upon the concept that learning occurs cumulatively over time. The six levels of cognitive development assume that a student progresses from recall or memorization at the lower levels to

the more abstract and complex level of evaluation. The levels are commonly refereed to as (McBeath 1992, 166):

- Knowledge,
- Comprehension,
- Application,
- Analysis,
- Synthesis, and
- Evaluation

The classroom can create an arena where the thought processes that are used at one level become the building blocks for the next level (Brazelton 2000, 60).

The paradigm supporting these building blocks allows the students to develop skills necessary to support critical thinking. Students must have an organized thought process to support critical thinking. During her study of one of the primary business disciplines Brazelton (2000, 62-63) expounded that Bloom's framework can be used in the classroom to help accomplish the educational goals that the accounting profession advocates. In addition she states (Brazelton 2000, 82):

If students taking sequentially-ordered courses are not exposed to communication at higher cognitive levels throughout the curriculum, those skills learned in the early courses never are developed fully.

Brazelton's thoughts are a challenge to all faculty members teaching a course to provide similar cognitive demands. We believe that the textbooks used in the course should aid the professor in pushing the cognitive demands on the students. In our mind even though most business disciplines are hierarchical by design, no one portion of the curriculum is solely responsible for developing higher level leaning and critical thinking skills.

STUDENTS' USE OF TEXTBOOKS

Recognizing that textbooks are a major part of the educational process, Issit (2004, 689) states that:

Textbooks function to some extent as the voices of the disciplines – as such they have a key function as building blocks in the architecture of knowledge. They present both the discipline's internal workings and its sense of self-identity as a coherent domain of study.

He also suggests that "the traditional form of the textbook is largely one that assumes and perpetrates a 'received knowledge, passive consumption' pedagogical model" (Issit 2004, p. 683). Sikorski (2002, 313) encourages professors to promote frequent and critical reading of textbooks, through either the use of quizzes or calling on students in class. They also claim that:

Students who succeed in introductory level college courses without critically reading their texts would seem less likely to excel in future individual learning endeavors in college and beyond.

Wandersee's findings (1988, 73) are consistent with the concept of a passive perception of textbook use in education. In studying 133 undergraduates from a private four-year college in the Midwest he found that "only 6% of the students queried make a conscious effort to link new concepts in the text to prior knowledge."

Phillips and Phillips (2007, 31) provided a look at student motivation for reading a textbook. Their study included 172 undergraduate students in introductory financial accounting using learning journals. They found that academically strong students appear to read with the primary goal of developing an understanding of the assigned material. On the other hand, academically weak students appear to read with the primary goal of reducing anxiety.

Phillips and Phillips recommended that professors take an active role in advising students with examples of how best to read the text. This advice encourages students to begin their study immediately and to avoid reading chapters later in the learning process. Students should then be in a position to attempt to identify and resolve issues

that seem confusing to them. They also found that only some students read learning objectives. Of those that do read the learning objectives 39% were in the top quartile and 27% were in the second quartile of academic ability as measured in the study. They found that most students who skipped the learning objectives were in the fourth and third quartiles (33% and 30% respectively.).

Brazelton (2000, 74-81) encourages faculty to use a variety of techniques in the classroom. These techniques provide the student assistance in developing tools necessary to be a critical thinker. Interestingly, her lists ignore the textbook. This lack of attention to the textbook could imply it is of minimal value to the learning process and should be discarded. Instead, as recommended by Phillips and Phillips the faculty member might take an active role in advising how to use the text. Eide (2000, 39) also suggests that providing the students with learning strategies helps the students to process information becoming active participants in the learning process.

Due to the difficulty in reading accounting textbooks she recommends the use of the PQ4R method (Eide 2000, 49). This process suggests reading the objectives as a first step. Learning objectives written at a higher cognitive level could then be considered a step in the critical thinking learning process. Proper utilization of the textbook and its learning objectives would appear to be an important part of the student's total learning experience.

A study of 104 students, conducted by one of the authors, enrolled in a Marketing, and a Managerial Accounting course found that students preferred a course that was based upon discussing exercises and opportunities where they are in a position to apply data to situations. Yet when these students were asked to rate the importance of various learning objectives the student's choice was at the same apparent cognitive level regardless of the intent of the learning objective**.** Accounting majors were found to be consistent in how they defined their learning style regarding Managerial Accounting learning objectives**.** However**,** overall we have concluded that students were aware of what they liked but had difficulty in defining their own learning style preferences**.**

IMPORTANCE OF LEARNING OBJECTIVES

Baker et al, discusses the importance of AACSB accredited schools writing learning objectives in compliance with Bloom's Taxonomy. A developmental teacher training program designed to improve the objective writing ability of university instructors showed a "…statistically significant improvement in faculty ability to write course objectives compliant with Bloom's Taxonomy..." Baker 30). The importance of properly thought through and written learning objectives is emphasized by Baker's statement:

Thus, under the premise that properly written objectives focus course instruction towards accomplishment of the desired learning outcomes, Developmental teacher training should help instructors attain higher levels of learning (28).

USE OF LEARNING OBJECTIVES IN TEXTBOOKS

A prior study conducted by one of the authors examined 24 textbooks used across the accounting curriculum. The published findings demonstrate that even though textbooks are integral to the education of accountants the majority of learning objectives in accounting textbooks are being focused on low levels of learning. The author also expressed concerns about the integration of these learning objectives into course and program assessment. Another published study by two of the authors examined textbooks used within the marketing curriculum. Consistent with the accounting study, it was clear that the learning objectives in marketing "are very focused on the first two levels of Bloom's cognitive domain".

Davidson and Baldwin (2005) used Bloom's Taxonomy to analyze the cognitive demands inherent in the end-of-chapter material in intermediate textbooks from 1934-2004. They emphasized that for students to develop professional level intellectual skills they needed to be exposed to the highest cognitive levels. They found that 86% of the end-of-chapter items "do not include a meaningful concentration of items that focus on the two highest levels of learning" (Davidson and Baldwin 2005, 89).

CURRENT STUDY

The current study is cross-curricular examining a variety of textbooks used in Finance, Financial Accounting, Managerial Accounting, and Marketing courses. These textbooks are utilized in the business core curriculum of many colleges. The textbooks include various author teams, publishers, and editions ranging from a 1st edition to a 14th edition (Table 1).

Campbell et al noted that accounting faculty relies heavily on textbooks. They also encourage research regarding assessment and the hope for improvements "in collegiate education generally and accounting education specifically" (106). Brodowsky and Taylor state, "defining the learning outcomes, based on course objectives that are to be assessed, drives the heart of assessment" (148). Assessment may be easier for faculty members if textbook learning objectives are consistent with course objectives.

Table 1: Textbooks

Curriculum Area	Author Team	Edition	Publisher
Accounting			
Financial	Edmonds, Edmonds, McNair, Olds	5th	McGraw-Hill/Irwin
	Kimmel, Weygandt, Kieso	4th	Wiley
	Libby, Libby, short	5th	McGraw-Hill/Irwin
	Albrecht, Stice, Stice	10th	Thomson/Southwestern
Managerial	Edmonds, Edmonds, Tsay, Olds	3rd	McGraw-Hill/Irwin
	Jackson, Sawyers, Jenkins	3rd	Thomson/Southwestern
	Hilton	6th	McGraw-Hill/Irwin
	Horngren, Sunden Stratton	13th	Pearson
Finance	Kidewell, Parino	1st	Wiley
	Gitman	11th	Pearson
	Keown, Martin, Petty	6th	Pearson
	Melicher, Norton	13th	Wiley
Marketing	Kotler, Armstrong	12th	Pearson
	Kerin, et. al.	8th	McGraw-Hill/Irwin
	Pride, Ferrell	14th	Haughton Mifflin
	Lamb, Hair, McDaniel	9th	Thomson/Southwestern

FORM OVER SUBSTANCE

Much of accounting theory is based upon recording the economic substance of a transaction over its technical form. An example is the recording of a long term leased asset as a Capital Lease with an asset and liability. The architectural principle of form follows function was incorporated into a published study regarding the use of textbooks in the Marketing curriculum. In that study, it was suggested that:

In building a textbook, if outcomes are considered an element of function and the content examples and exercises in chapters represent form.

This concept of substance can be applied throughout the business curriculum. However, it appears that the form or existence of learning objectives within the textbooks is more important than the substance or why the learning objectives are integral to the educational process. A study conducted by one of the authors found that students are not always aware of how the different objectives align with how they feel they can individually learn best.

As professional educators' faculty should be concerned with student learning and how the student's learning process can be improved. Accrediting bodies, such as the Regional Accreditation groups and AACSB, are

stressing the Assurance of Learning for institutions to maintain their accredited status. Learning objectives should be associated with the substance of the learning and not simply the form.

The LAS Teaching Academy's website on writing learning objectives provides "Five Tips to writing Great Learning Objectives":

1. Write objective for student learning, not faculty instruction.
2. Use action verbs to describe leaning objectives.
3. Try to avoid words like "learn", appreciate", and "understand."
4. Identify knowledge, skill, or attitudes as learning objectives. Avoid merely listing topics.
5. Tie outcomes to course activities.

These tips are focused on writing learning objectives for courses. Item "1" is the dominant issue related to the paper. Items 2, 3 and 4 appear to be directly transferable to writing learning objectives for textbooks. Number "5" explicitly mentions course activities and based upon item "1" infers student learning.

LEARNING OBJECTIVES UTILIZED

As a cross curricular business analysis this study looks at learning objectives used in some of the courses usually found in the business core:

- financial accounting,
- managerial accounting,
- marketing and
- finance.

Learning objectives from textbooks used in introductory level courses were analyzed to see what cognitive level of Bloom's Taxonomy could be associated with the verbs used in the learning objective. The cognitive levels were based upon McBeath.

According to McBeath, verbs such as describe, discuss, explain, identify, and understand are found in the lowest cognitive levels of knowledge and comprehension. The vast majority of the learning objectives in the textbook sample used these verbs (Table 2). These textbooks also include exercises, problems and cases that expect students to apply the concepts discussed. Table 3 shows the total number of learning objectives. There are far less verbs than learning objectives in this table because many of the primary verbs are each utilized multiple times; thus, the percentages encompassed by these five verbs appear to be more representative of an author's preference than a specific use or meaning of the verb.

Table 2: Percentage of Learning Objectives Covered by the Same Verb with each Curriculum Category

	Describe	Discuss	Explain	Identify	Understand	All Others
Financial Accounting	12.1%	1.6%	21.8%	9.7%	5.1%	49.7%%
Managerial Accounting	12.4%	3.1%	19.1%	5.3%	2.0%	58.1%
Finance	22.9%	12.6%	24.5%	7.2%	8.1%	24.7%
Marketing	11.2%	11.6%	11.6%		7.7%	57.9%

Table 3: Number of Learning Objectives

Curriculum Area	Number of Learning Objectives	Number of Primary Verbs Used
Financial Accounting	372	38
Managerial Accounting	509	54
Finance	360	33
Marketing	452	26

For each textbook category, the learning objectives from one chapter within a textbook were compared to the end-of-chapter exercises. This comparison tested to see if the choice of primary verb in the learning objective was designed relative to a student learning outcome or just to include a phrase for technical material coverage. Table 4 shows the textbooks and chapters sampled. Each exercise was examined relative to the expectation shown in the exercises description and/or requirement. The textbook with the highest match between expectations and primary verb was Edmonds Managerial at 33%. In this text, when the learning objective for which the expectation of an exercise matched the learning objective, there was at least one exercise where the expectation was different. The cognitive level associated with the exercise was at a higher cognitive level than is associated with the primary verb that was used in the written learning objective. It should be noted that even in this text, there were not any exercises associated with three of the learning objectives "7, 8, & 9".

The most common primary verb used in the selected chapters was "explain" which was used nine times out of the 31 learning objectives. This is not unexpected as explain is the most common primary verb as documented in Table 2. Most of the exercises required a computation and then some form of analysis was expected prior to the explanation. While the Lamb Marketing text did not require computations, the end-of-chapter material usually involved writing a description of some kind. Exercise 9.1 associated with Learning objective 9 to explain, required the students to choose, identify and then explain "how'. Even for the primary verb "describe" one of the exercises expected the student to first "investigate".

Table 4: Relationship between Expectations for End-of-Chapter Material and the Primary Verb in the Stated Learning Objectives

Textbook	# of Exercises were the Expectation is Associated with the Primary Verb	# of Exercises	%
Libby - Financial Accounting	7	22	31.8%
Edmonds - Managerial Accounting	4	12	33.3%
Gitman - Finance	0	6	0.0%
Lamb - Marketing	3	13	23.1%

DISCUSSION REGARDING END-OF-CHPATER MATERIAL

Davidson and Baldwin are concerned about the lack of end-of-chapter materials at a high cognitive level. End-of-chapter materials at the higher cognitive levels implies that students could be pushed to improve their critical thinking skills.

Marshall and Caron examined end-of-chapter material for some course commonly found in the business core. Their concerns flowed from AACSB's evaluation of the:

- instructor's role developing courses,
- demonstrating effective teaching, and
- overall innovation in the institution's School of Business.

They believe that:

When assessing the desired outcomes for students, all relevant stakeholders would likely concur that it is important that their higher education experiences take the student beyond knowledge and comprehension of a particular subject. (72)

Their findings included that:

Forty percent of the problems were at the most basic level of Knowledge, followed by Comprehension with 49 percent. (74)

An area of concern was that the students; were being cued based upon the relationship of the material contained within the chapter. This concern was further compounded by narrowly defined cases. These issues led the authors to conclude that "students are not being required to move past the Application level on the Bloom's Taxonomy" (75).

We found that the end-of-chapter material written at cognitive levels is different from the stated learning objectives. We did not access what percentage exists at the highest levels of the cognitive domain. Our findings are similar to those of Baldwin & Davidson and Marshall & Carson that the exercises sampled, for the most part, expected students to be at best the application or analysis level. Meanwhile, the authors' expectations expressed through their learning objectives are at the knowledge and comprehension level. Our concern that the lack of consistency between what is stated and what is expected may lead students to learn less than that intended by the classroom professor.

ANALYSIS

The textbooks examined in this study are using many learning objectives at the lowest levels of the cognitive domain. Included in the list of verbs most often used is the word "understand". The Las Teaching Academy has this verb included in the list of the words to be avoided as their meanings are not concrete and are difficult to assess. The reuse of the verbs by the same author team appears to be an indication of preference rather specific pedagogical meaning. For instance for all of the Managerial Accounting Texts the verb "explain" is used 10.1% of the time. Yet the usage varies by author team. The percentage of total learning objective within the texts was: 22.8%, 17.9%, 26.1%, and 6.7%. This type of variability among author teams existed for all of the texts in all of the curriculum categories.

This variability may be simple disregard and as such gives the impression that learning objectives are included in the texts because they need to be there, not because the authors have written the text based upon these objectives. Faculty teaching courses are attempting to develop course level learning objectives. They may be making the assumption that the text being used is aimed at accomplishing a certain level of learning. Faculty could also be choosing similar verbs because they are more focused on instructing technical material than student learning. Either way there is apparently no substance to the verbs used to develop the learning objectives in the textbooks.

Faculty trying to develop quality learning objectives should be focused on student learning. Each learning objective should be based upon an action-oriented primary verb. If the professor in the classroom and the textbook author both expect students to be able to apply the material at the end of covering the material in the chapter, then the action verb should be application-oriented and not knowledge-oriented. A verb, such as describe, is associated with the "Knowledge and Comprehension" levels of Bloom's Taxonomy, yet different author teams can use it to mean different things.

For instance, in Financial Accounting, Libby et al have the learning objective in chapter 10: LO: 1 "Describe the characteristics of bonds." Their exercises associated with LO 1 include filling in the blanks and explaining a portion of a bond disclosure. Their problem material for LO 1 is entitled "Analyzing the use of Debt" and includes a computation. In other words, the exercises appear to focus on describing the bonds, but the problem material focuses on at least applying - if not analyzing - the bond's characteristics. So this leads to a question of the author team's approach to obtaining the objective. The author's expectation for the students may be to simply describe the bond's characteristics, or maybe the author's expect the students to be able to differentiate the bond's characteristics, hoping that the students can learn to properly value the bond other than using the textbook. Note: McBeath includes both differentiate and calculate in analysis.

In Finance Gitman Chapter 4 has LG6:

Describe the procedures included in (1) determining deposits needed to accumulate a future sum, (2) loan amortization, (3) finding interest of growth rates, and (4) finding an unknown number of periods.

All of the Self-Test Problems, Warm-Up Exercises, and Problems associated with LG 6 are all computational in nature. This involves applying the material. Students who expect to be assessed based upon providing a description will be confused when they are asked to compute something. Or it is possible that students don't really pay attention to the substance of the learning objective.

This is also exacerbated when the expectations of the end-of-chapter material are at a different cognitive level than the written learning objective. This gives the impression that the authors are using the learning objectives as form regarding coverage of technical material rather than the substance associated with student learning.

LIMITATIONS AND FURTHER RESEARCH

None of the textbook authors or publishers mentioned has been interviewed for this paper, which could provide additional information for future study. If they had, then additional information could have been provided. Also, there has not been an extensive study of faculty interpretations and use of textbook learning objectives for text selection and development of course level learning objectives. Further research should examine how course level learning objectives are used within the ongoing methodologies to assess student learning.

CONCLUSION

The textbooks used in the core business areas of Financial Accounting, Managerial Accounting, Marketing, and Finance appear to use learning objectives at the lowest learning levels of the cognitive domain without thought for student achievement. Learning objectives should be an integral part of the learning and assessment process. Faculty should have a substantive basis for the verbs selected to be involved in these processes. Hopefully the verbs used will be based upon a focus of student learning rather than only instructional content.

AUTHOR INFORMATION

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